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(Phone State 4821)Editorial Offices:  
39 Cortlandt St., New York City  
(Phone Cortlandt 8362)  
F. M. WATERS, ManagerPhiladelphia, Pa.  
C. W. NORDLAND,  
5626 Baltimore Ave.San Francisco, Calif.  
J. K. NOVINS,  
Gillette Bldg., 830 Market St.  
(Phone: Douglass 4667)

## EDITORIAL STAFF

A. Adams Lund	Stroud Jordan
N. W. Kempf	A. P. Bryant
Clifford Clay	R. L. Purdon
Orville H. Kneen	
Carey P. McCord, M. D.	
De Witt Cottrill	D. M. Hubbard
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# When an ill-chosen thread could spoil the beauty of a famous tapestry



AMONG the famous tapestry weavers of old, the tiniest defect in a single thread or the slightest shade of difference in color would bring to naught the toil of years. Such little things made a big difference to artisans whose handiwork found favor in the palaces of kings.

IN no other field of manufacture do so many so-called "little things" become so important as in the blending of quality products. The merit of every single ingredient must be weighed and tested according to strictest standards. There are big little things...little things that make a big difference.

Mathieson Vanillin and Coumarin appeal to manufacturers who place emphasis upon important little things. Mathieson products meet every demand for high quality and uniformity. The skill used in their manufacture—the care exercised to maintain Mathieson standards of purity and wholesomeness—are the most exacting known to chemical science... Specify Mathieson fine chemicals.



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OF SODA  
BENZOIC ACID  
BENZALDEHYDE**

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## Editorial

ROBERT RANDOLPH, Editor

### "Into the Hands of the Philistines"

**W**HEN Lorillard stepped into the breach with their Old Gold ad, "Eat a Chocolate, light an Old Gold, and enjoy both!" few people connected with the candy industry realized that this friendly little piece of copy was shortly to become the means of delivering them into the hands of the Philistines.

The initial reaction to this advertisement was much the same as that of a drowning man to whom a straw has been thrown. Old Golds to the rescue! The wish was father to the thought. Few saw the subtle inferences of this truly remarkable piece of copy. Here was the opportunity they had been looking for,—the chance to fight fire with fire,—to boycott Luckies by urging the adoption of Old Golds. In their frantic zeal to administer a needed rebuke to the American Tobacco Company the chief purpose and potential dangers of the Old Gold copy were respectively condoned and obscured. Even the advertising department of the N. C. A. ultimately capitulated to the demands of the mob for its pound of flesh, permitting themselves to be drawn into a cigarette war of long standing. In the current advertisement of the N. C. A. sent to trade papers this week the headline reads "Support the cigarette manufacturer who supports you," followed by reproduction of the Old Gold cigarette advertisement over the signature of the National Confectioners' Association! Retailers are asked to plaster their show windows with reproductions of the Old Gold ad and thus increase the effectiveness of

the Lucky Strike copy which it pretends to answer. If this move is not immediately retracted before the copy appears in publications our industry will have been sold for the proverbial thirty pieces of silver.

Lurking behind this friendly gesture of the Lorillard Company is a subtle trap for the unwary. Following the plea to "Eat

a Chocolate, light an Old Gold, and enjoy both!" come the words "two fine and healthful treats." Mr. Confectioner, are *you* prepared to endorse the healthfulness of the Old Golds or any other cigarettes? Are you willing to give your support to a lie which will forever compromise you in the eyes of your children? The Journal of the American Medical Association characterizes the health claims of the cigarette manufacturers as "essentially vicious." Then, who are we, to support the healthfulness of any

cigarette? In fact, is not our strongest weapon of defense the demonstrated healthfulness of sweets as opposed to the recognized unhealthfulness of cigarettes—coffin nails, as they were called? Shall we surrender this weapon without struggle or protest?

We submit that this particular move on the part of the National Confectioners' Association in tying in with the Old Gold advertising campaign is not only compromising but dangerous. We submit further that it is beneath the dignity of the confectionery industry to permit itself to be proselyted to the cause of any cigarette advertising campaign however altruistic the purposes of that campaign may appear



**BEWARE!**  
of tying in with this campaign



to be. Nor can we afford to allow a healthful, wholesome food such as candy to be bracketed in unholy alliance with this dangerous habit. Let candy and tobacco go their separate ways. We have all to lose and nothing to gain by the alliance.

## A Fastidious Public and The Sanitary Code

**N**UMEROUS pending revisions, both in the sanitary provisions of the health statutes of different states and in their interpretation by the authorities charged with their enforcement, necessitated a break in the publication of the voluntary sanitary code prepared for the confectionery industry by THE MANUFACTURING CONFECTIONER. The scope and purpose of the code were explained in some detail in the September issue by our Dr. Carey P. McCord. With the December issue there

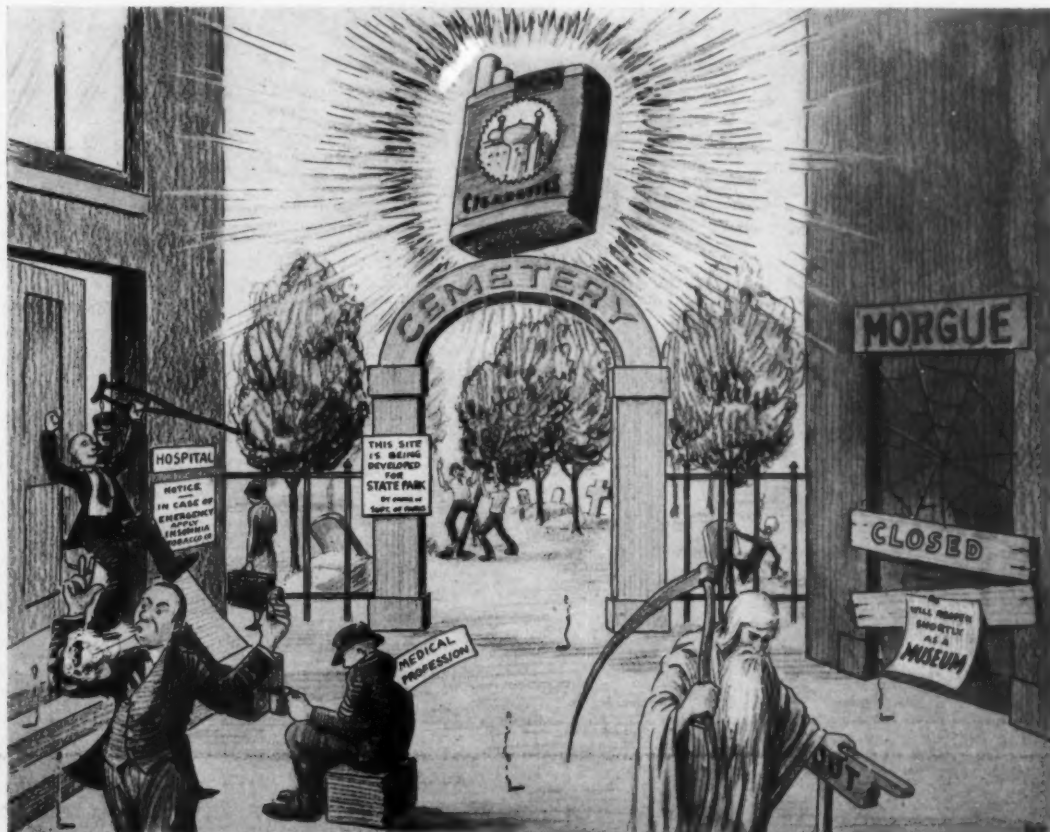
began the presentation of the main body of the code. The current number concludes Section Three, dealing with that portion of the sanitary requirements which has become mandatory by reason of existing laws and ordinances.

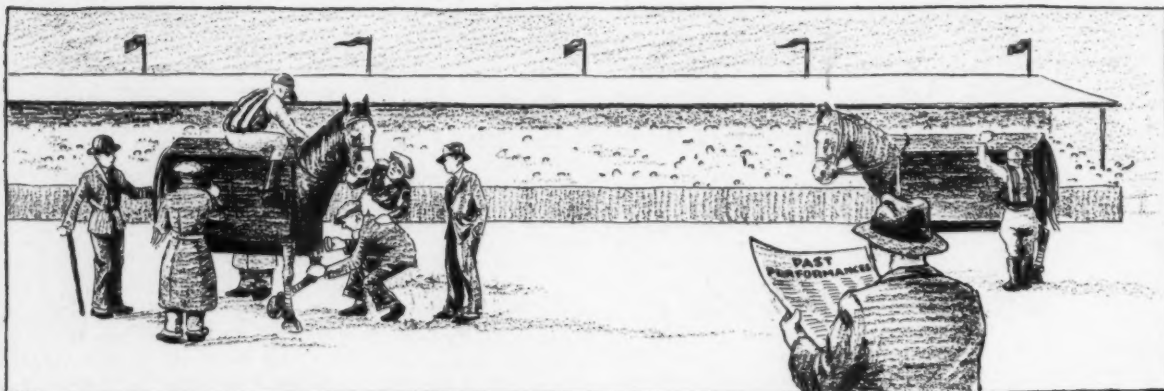
If the confectioner ignores these provisions, he does so at his peril. But by far the bulk of modern thought and practice in plant sanitation and hygiene is to be found nowhere in the laws, nowhere in books published for the confectioner's guidance, but which it is becoming increasingly necessary for him to discover and apply if he would avoid offending the food sensibilities of an enlightened consumer-public.

There must be some common language—some standard by which our individual concepts of sanitation may be measured. It is not only desirable but highly necessary that such a standard be originated from *within* the industry if it is not to be legislated upon us or crammed down our

(Continued on page 66)

"Blessed is he that readeth . . . for the time is at hand"--Rev. I-3.





"If I were betting on a horse race I should prefer to place my money on the horse with the best record rather than on the one that 'measured up' best."

## Formula vs. Performance

*A chocolate manufacturer tells  
what he would look for if he  
were a buyer of coatings*

BY ERNEST FIEUX  
(Vice-President, Runkel Brothers)

**T**HE subject of chocolate coating is one that has long been discussed authoritatively and in great technical detail. But the majority of these articles have been handled from the angle of the coating manufacturer rather than from the standpoint of the man who buys and uses the coating in the manufacture of candy. Far from effecting a noticeable improvement in the finished goods, much that is of value in these discussions appears to have been wasted on desert air. Sooner or later it must be realized that the success of a coating does not depend solely upon those fine manufacturing distinctions which have elevated coating manufacture to the status of a specialized industry, but to a much greater degree than is generally recognized, upon the care with which any given quality of coating is subsequently stored, handled and manipulated in the buyer's factory.

I contend that it is no less important for the confectioner to understand the frailties and operating requirements of his chocolate coatings than it is for him to know the tech-

nique and underlying principles of sugar-boiling. Nevertheless, it is a matter of daily observation to the coating manufacturers that in a great number of instances where they are blamed by their customers for bloom, lack of proper consistency, smoothness, flavor or gloss, it subsequently develops that the fault lay in some mistaken practice or obscure operating condition in the buyer's own tempering, dipping or packing rooms. It is with this experience in mind that the writer approaches the problems of the coating buyer in an endeavor to clear away some of the misconceptions which still exist as to the right and wrong way to select, care for and apply, that material which to him is second only in importance to refined sugar.

### Just What Is Coating?

First of all, it must be borne in mind that chocolate coating is a *mechanical* rather than a chemical mixture. A peculiar consistency is produced in which no one of the ingredients is soluble in any of the others. The intimate mechanical mixture of these ingredients is due

solely to the process of manufacture, and it is in view of the extremely delicate nature of this combination that the confectioner must exercise a great amount of care in his tempering and dipping processes so as not to disturb the relative arrangement of the tiny particles of the different ingredients which go to make it up.

The frailties of chocolate coatings may in most instances be traced to the shortcomings of their principal ingredients:

- (1) *Cocoa butter*, which melts around 88 to 90 deg. F., and which is therefore critical as to temperature.
- (2) *Sugar*, in its pulverized form tending to absorb moisture.
- (3) *Cocoa mass*, a fine powder which is not greatly affected by climatic conditions when butter-free.

If the product is a milk coating, another element of uncertainty is added. Milk fats have an extremely low "mush point," with all its dangerous implications of ruined texture and diminished stand-up properties. They become rancid readily

## THE MANUFACTURING CONFECTIONER

and their residual powders tend to absorb moisture.

It is evident that practically every ingredient which enters into the manufacture of chocolate coating possesses some inherent weakness necessitating added care and attention on the part of the confectioner in handling it and applying it even under the most ordinary conditions of temperature and humidity.

### Buying On Formula vs. Performance

Buying coating on a formula or on some such basis as the specification of butterfat, milk solids, etc., is almost analagous to an engineer's buying a complicated piece of machinery by weight. Machinery, too, has its design and its technical investigations involving computation for strength of parts, but no matter how significant this data may be from a laboratory standpoint, the final criterion of purchase is "performance." What will the machine do in a practical workout? Just so, chocolate coatings must be bought on performance.

The chemistry which is today be-

ing injected into the chocolate industry is constantly changing the relationship between formula and performance. It might reasonably be expected that, everything else being similar, a piece of coating from one manufacturer containing less butter, would run heavier than the product of another manufacturer containing more butter, but such is not always the case. Furthermore, the coating which contained the lower percentage of fat might in reality be a far better coating as cocoa butter does not enhance the flavor, nor does it in any way contribute to the stability and keeping quality of the product.

In recent years there has grown up among the more important coating buyers what might be referred

to as "the mechanical purchasing complex." Various pieces of mechanical equipment are being used to determine the characteristics and working properties of samples in advance of practical dipping tests. The use of the viscosimeter to determine the fluidity or thinness of a coating, is a case in point. The variables which enter into the viscosity of a coating are so many and so great that it is difficult to make fair comparisons using such a device. Variations in temperature both in the jacket of the viscosimeter and in the outside air, changes in humidity, the fineness of grind or smoothness of the coating, and differences in surface tension or adhesion between the disc and the coating—these are some of the in-



A "color light" is indispensable to the proper matching of color.



## FORMULA VS. PERFORMANCE



"Practically every ingredient entering the manufacture of chocolate possesses some inherent weakness."

fluences which make it a comparatively easy matter to *misinterpret* these readings.

### How Shall the Coating Be Tested?

Smoothness, fluidity, color and gloss are largely a matter of individual requirement, consequently it is difficult to lay down a set of rules which will not be challenged by the advocates of this or that characteristic in the finished goods. So far as the ultimate consumer is concerned, taste and appearance are the sole criterions of value. The various elements which go to make up these attributes are not always sensed individually by the consumer but must be analyzed carefully by the confectioner and passed upon element for element to insure a pleasing reaction to the product as a whole. And since neither mechanical nor chemical specifications can assure the production of a coating possessed of the requisite appearance, taste and dipping qualifications, it is obvious that he must place his main reliance on the practical dipping test, conducted by an unbiased operator under actual working conditions.

To examine and taste a solid piece of chocolate and attempt to pass judgment upon it in that condition, is the most serious mistake which can be made by the coating buyer. There is only one way to sample coatings and that is—*melted* and at a temperature of around 87 degrees F.

Since color varies with the temperature of the chocolate, if two or more samples of coating are to be tested competitively, care must be taken to see that all of the samples are brought to precisely the same temperature. Furthermore,

color comparisons should never be made in the average light. A "color light" may be obtained for a small sum and the samples arranged by taking equal thicknesses of the previously melted chocolates on flat spatulas and placing them side by side directly under the light. This method is preferable to the more customary use of pans inasmuch as the color varies according to their nearness to the observer and their location with respect to the testing light. Light reflection not infrequently results in a fallacious conclusion as to the true colors of the samples.

The fineness of a coating is also best determined with the coating in the molten state since in this condition it is not dependent upon the heat of the mouth to melt it. In order to gauge the degree of fineness, place the melted chocolate behind the upper front teeth with the tongue and bring the front of the lower teeth against the back of the upper teeth with a circular, grinding motion.

### Pitfalls of Factory Operation

Coating being about as staple as anything consumed in the manufacture of candy, observed defects in the coated product should not be made the occasion for an outburst of indignation delivered at the head of the coating manufacturer since, although the latter lay no claim to being infallible, fully 90 per cent of the troubles brought to the coating manufacturers' attention are found to have originated in the candy factory. Confectioners both large and small are inclined to count the dollars spent on chocolate handling equipment as something of an unnecessary expense. Many of these concerns have started small and

grown big. Long after every other department in the plant will have been modernized, relics of the Barbaric Age of chocolate handling will have remained.

A small man starting in business in let us say for example, the home-made line, uses an ordinary household double boiler and heats his chocolate over a gas stove. Small wonder that he seldom turns out a decent-looking chocolate! The coating absorbs the vapors from the water compartment of the boiler while the condensation moisture on the sides of the kettle and under surface of the cover drip back to hasten its ruination. This primitive type of equipment should never be used for the melting or tempering of chocolate coatings. Obviously, concerns likely to use it only operate during the winter months, as the working conditions are far beyond the possibility of turning out a salable product during warm weather.

The medium size manufacturer usually has a melting kettle surrounded by a hot water jacket which is in turn heated by a gas jet placed under the kettle. The location of this kettle is the source of another series of difficulties. If it is placed at the point most convenient to the coating machines or hand-dippers, and it usually is, this almost necessarily implies that it is located in the dipping or enrober room, which is bad practice.

### The Unsuspected Humidifier

A gas flame creates moisture during the process of combustion. This moisture tends to *humidify* the room in which the melting kettle is placed. Hence the proper location for the melting kettle is not always the obvious or convenient one.

It is difficult to exaggerate the harm which even a comparatively small amount of moisture will do to a coating. The infusion of water with the coating mass produces a heavy dipping piece, while the vapors in the atmosphere settle on the centers and on the surface of the coating to the ultimate impairment of the finished goods.

Thanks to the energetic salesmanship of the refrigeration equipment manufacturers, the need of adequate refrigeration for cooling the dipped candies is now pretty generally understood. Much work remains to be done in this direction, however,

(Continued on page 47)







## Answers to December Questions



1. Which of the commercial confectionery sugars is the normal blood sugar of the human body?

*Ans.:* Dextrose (corn sugar).

2. How do inert gases serve to protect nutmeats from deterioration?

*Ans.:* By exclusion of air, without which insect life cannot survive. Absence of air also prevents oxidation and consequent discoloration and impairment of flavor. The gases commonly employed are carbon-dioxide and nitrogen, whose use for this purpose is covered by the "Vitapak" patents.

3. What are the relative merits of candy vs. tobacco for soothing the nerves?

*Ans.:* Tobacco, containing, as it does, a habit-forming alkaloid, leaves the nervous system progressively weaker after the soothing, narcotic effects of the nicotine have worn off. The sugar in candy steadies and quiets the nerves without these enervating after-effects.

4. What is it that has been called "the moth balls of the fig industry?"

*Ans.:* Bay leaves, which are frequently packed with bulk figs to discourage the entry of insects.

5. What factors determine the shelf-life of marshmallow?

*Ans.:* The normal rate of crystallization of sucrose and the moisture-retaining properties of secondary substances, such as gums, dextrans, albumen, malt extract, etc.

6. How does candy prevent fatigue?

*Ans.:* By furnishing needed energy in quickly available form immediately in advance of the exertion.

7. Name an important edible nut whose shell oil possesses possibilities as a cure for leprosy.

*Ans.:* The Cashew.

8. How does barometric pressure figure in the manufacture of marshmallow?

*Ans.:* The pressure existing within the air cells of the marsh-

## ASK ME!

*This month's question and answer section is a chocolate forum all its own—how good are YOU at answering these questions that every chocolate man should know?*

1. What is the most frequent cause of coating troubles in confectionery factories?

2. Name the three major varieties of cacao.

3. To which of these varieties do the following chiefly belong: Accra, Arriba, Porto Cabello, Bahia?

4. What sugar of the future is expected to be made from corn stalks and cane waste?

5. Why do chocolate melting and tempering kettles tend to humidify the dipping room?

6. What percentage of sugar is contained in white syrups made from raw sugars? Why is this percentage more or less fixed?

7. What are the most favorable conditions for testing chocolate coatings?

8. What is the average yield of dry cacao per tree?

9. What tree is said to produce a liquid similar in taste and appearance to cow's milk?

10. What are the recommended temperatures for centers, coating and the chocolate dipping room?

**EDITOR'S NOTE:** The answers to all questions except Nos. 4 and 9 will be found in the text matter of the current issue of THE MANUFACTURING CONFECTIONER.

mallow corresponds to the barometric pressure at the point of manufacture. If we subsequently introduce the marshmallow into localities having lower barometric pressures (viz., higher altitudes) the tendency is for the air cells to burst; whereas, if we make the marshmallow in an area of low

pressure and ship it to a high-pressure area, the greater pressure existency outside of the cell walls of the marshmallow is likely to cause the structure to collapse.

9. What book, recently published, honestly and effectively refutes the attacks upon candy which are contained in Dr. Lieb's "Eat, Drink and Be Healthy" (the entire issue of which is reported to have been purchased by the American Tobacco Company for distribution in connection with their "Lucky Strike" campaign)?

*Ans.:* "The New Knowledge of Candy," by Dr. Herman Bundesen.

10. Which of our major confectionery nutmeats is almost exclusively an American product?

*Ans.:* The pecan.



## GREER Wire Belt

Greer Wire Belt is made in our own plant out of the very best wire. Standard belts in 16-in., 24-in., and 32-in. widths, fit any Coater or Enrober.

Any length of belt furnished as requested.

Wire belts are expensive. Why not buy the best?



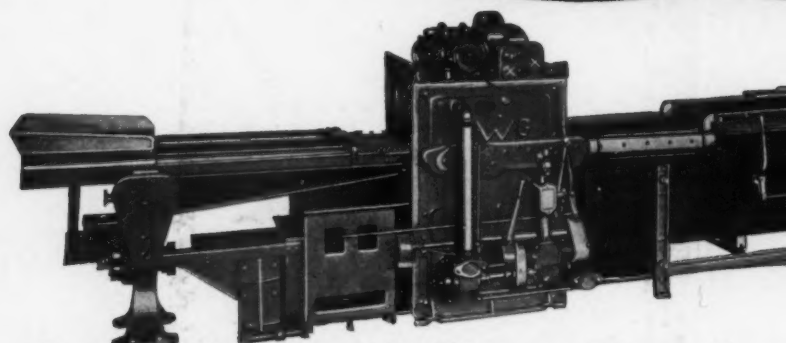
Water Jacketed

## PATENTED HENDERSON Crystal Rack

The Henderson Crystal Rack is the solution to the Crystallizing problem.

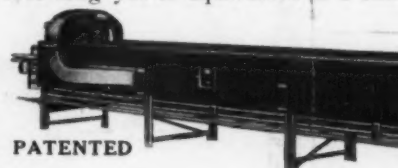
Produces 600 pounds of high grade goods per batch. Two batches per day.

Most compact, sanitary, economical, and labor saving method of making crystallized work.



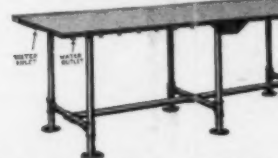
## GREER Automatic Plaque Transfer

Where floor space is at a premium the Greer Automatic machine is the ideal means of overcoming this difficulty. The machine and are automatically transferred to plaques in cooling and Cooling machine operate continuously—there is no waiting machine is only 24 feet long yet is equivalent to a tunnel.



## The GREER Cooling Tunnel

The Greer Cooling Tunnel is the ideal means of overcoming this difficulty. The Greer Cooling Tunnel is the ideal means of overcoming this difficulty. The Greer Cooling Tunnel is the ideal means of overcoming this difficulty.



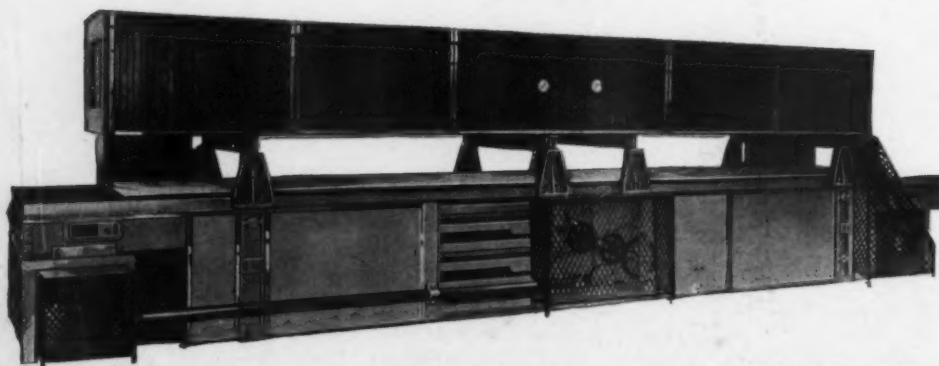
## GREER Quick Cooling

The surprising feature of this machine is its cooling capacity. This is due to its efficient method of injecting, circulating the water. It uses very little water and is obtainable only on a Greer machine.

## J. W. GREER

Manufacturers of Confectioners' Machinery

119-137 Windsor St.



PATENTED

## GREER Chocolate Cooling Machine

The Greer Chocolate Cooling Machine is recognized as the best and most modern means of cooling any solid moulded chocolate. The standard machine has a capacity of 2500 pounds per hour and yet occupies a space only 5½ feet x 28 feet.

Moulds of any size can be used in this machine. Warming tunnels are supplied to warm and return empty moulds to moulding room.

For  
Bars and  
Ten Pound  
Cakes



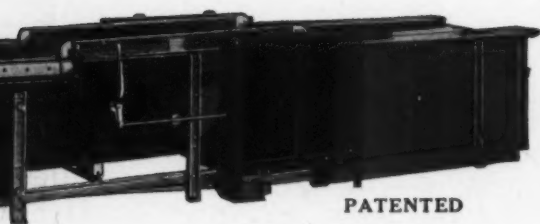


## GREER Perfected Chocolate Melting Kettle

The Greer Perfected Melting Kettles are the latest, most sanitary and efficient type of Melter. The use of Greer Kettles insures a uniform coating.

Outside surface is polished. No paint to crack off. Removable bearings throughout.

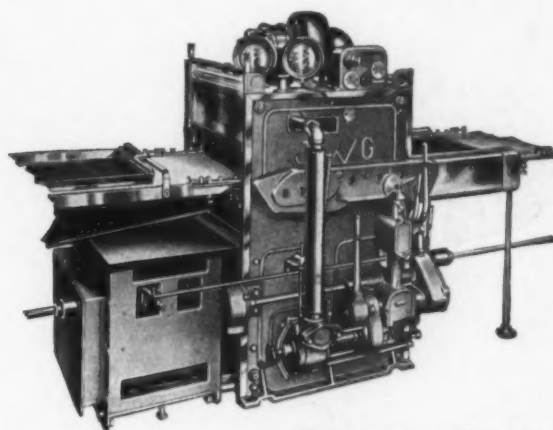
Made in 150, 300, 500, 1000 and 2000 pound sizes.



PATENTED

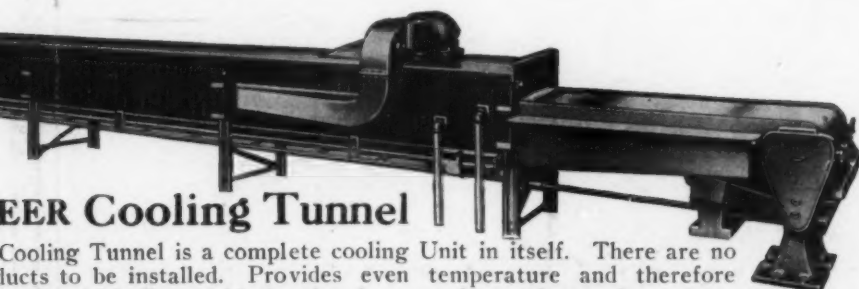
## Greer Automatic Plaque Transfer Cooling Machine

er Automatic Plaque Transfer Cooling is difficult. Goods are fed thru Coating plaques in cooling machine. The Coat- there is no intermittent motion. Cool- lent to a tunnel 90 ft. long.



## GREER Coater

The Greer Coater produces a remarkable amount of coated goods, and yet maintains the highest of quality. Simplicity has been achieved at last in a coating machine. In operation it is practically noiseless—a noiseless type of blower and drive being used. Variable Speed Transmission—NOT STEP GEARS—provides any desired speed.



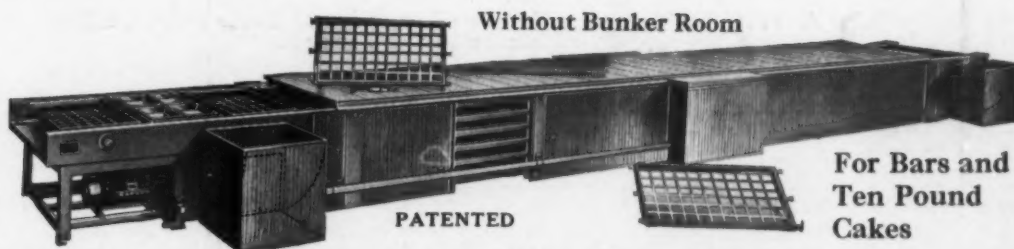
## GREER Cooling Tunnel

Cooling Tunnel is a complete cooling Unit in itself. There are no ducts to be installed. Provides even temperature and therefore is. Tunnel is thoroughly insulated so can be used even in a warm ed system of conveying belt insures much longer life for belts. Can o any make of Coater or Enrober.



## Greer Candy Slab

ature of this Candy Cooling Slab ity. This is due to the unusually injecting, circulating and draining very little water. These features on a Greer Slab.



## GREER Chocolate Cooling Machine

This machine is the same as that illustrated on opposite page except for Bunker Room. With this type cold air is supplied from coils located in some other part of the plant.

**GREER COMPANY**

Confectioners' Machinery That Pays Dividends

or St.

CAMBRIDGE, MASS.



**Genuine Famous**  
**Clark Seedling**  
**DIPPING STRAWBERRIES**  
**From**  
**Hood River, Oregon**

**Processed the dependable Blanke-Baer way.**

**A Trial Shipment will convince you of their superiority.**  
(PACKED 6 No. 10 CANS TO CASE)

**— also —**

**DIPPING PINEAPPLE CUBES**  
**DIPPING PEACH CUBES**  
**DIPPING KUMQUATS**

**DIPPING CHERRIES**  
**DIPPING PRUNES**  
**DIPPING RAISINS**

We can also supply our regular Ettersburg variety Dipping Strawberries  
packed in No. 12 cans to those of the trade who prefer them.

**BLANKE-BAER EXTRACT & PRESERVING CO.**  
3224 Kingshighway, St. Louis, Mo.

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## Formulas vs. Performance

(Continued from page 42.)

as there are still a number of confectioners in the medium size field who have not yet been persuaded of the ultimate economy of having cold dry air to work with. The majority of these still cling to the time-worn practice of controlling the temperature by opening the windows.

Irrespective of the prevailing temperature outside, the window system is without doubt the poorest method of cooling a room that can possibly be obtained. Near the windows the temperature becomes materially lower than in the center of the room, or near a side wall where there are no windows and the air tends to become stagnant. I have seen a great many dipping rooms where the goods turned out will be poor on one side and perfect on the other. And yet one will question the quality of the chocolate under these conditions.

Moving air and uniform temperature throughout the room and throughout the day are of vital importance to the production of good coated goods. The practice of putting coils on the ceiling with drip pans underneath and allowing nature to create its own circulation is an extremely poor method. It should be discarded when laying out new work and changed over as rapidly as possible where it is already installed.

Where the necessary circulation is created through the use of fans, and by the word "fans" I mean the

steel plate type commonly known as pressure fans, this system may be made to produce substantial economies through the use of outside air during the months when the temperature of the air is around 40 or even 45 degrees F., by discontinuing refrigeration during these periods.

Another economy commonly effected is to use the air coming from the tunnel of the coating machine to cool the packing room, provided the room is of small dimension, otherwise the air from the tunnel must be re-circulated so as not to increase the cost of the refrigeration.

### Avoid Cold Centers

In many plants the centers ready to be dipped are allowed to stand in the dipping room for long periods of time, sometimes as much as overnight. This is not good practice for if the centers are cold and the temperature of the chocolate being dipped fairly low, any slight "whipping" of the coating by the dipper is likely to produce air bubbles which, because of the cold center and low temperature of the coating, will not get a chance to break through the chocolate skin and permit of a smooth surface. Furthermore, a cold center will often produce a dipped piece with insufficient gloss.

The whole matter resolves itself down to the definite conclusion that

to produce a first-class chocolate-dipped candy, the temperatures of room, coating and centers must be closely controlled and that any great variation from the proper temperatures will result in an impairment of the goods.

What are the proper temperatures? A great deal has been said on this subject but 65° F. is a very fine room temperature for the average conditions. The coating should feel just slightly cool to the back of the fingers (probably around 88° F.). The centers should be around 80° F. Slightly lower temperatures for the centers are reasonably safe but centers permitted to go below 65° to 70° F. are entirely too cool for perfect work.


A resume of the foregoing suggestions leads us to the following conclusions:

- (1) That all melting kettles, whether of the steam-hot water or gas-hot water type, must be located in a room by themselves and not permitted to humidify the air of the dipping room;
- (2) That both the hand-dipping and enrober rooms must be maintained at a specific and uniform temperature of approximately 65° F. and the air kept moving throughout the room;
- (3) That the centers must have an average temperature between 70° and 80° F. in order to produce a fine, glossy, finished piece of goods.

(EDITOR'S NOTE.—Mr. Fieus's next contribution to THE MANUFACTURING CONFECTIONER will be an illuminating series of specimen floor plans showing the right and wrong way to lay out dipping rooms, etc. This is a feature which we know will appeal to the practical men of the industry. Be on the lookout for it in an early issue.)

# White Syrups from Raw Sugars

BY STROUD JORDAN



**D**URING the past decade rapid advances have been made in decolorizing sugars and sugar syrups. We are no longer dependent upon "bone char," for many and varied grades of activated carbons are the direct result of painstaking research. In some instances granular "bone char" has been entirely replaced by finely ground vegetable carbons, but their application has not always been easy sailing. Difficulties have arisen and prejudices, not always well founded, have had to be overcome.

The general trend of all research has been to promote efficiency in industry, and this can often be accomplished by eliminating unnecessary labor. It is but natural, therefore, to ask why it is necessary to boil off water from white syrups, crystallize the sugars, centrifuge the resulting mass of crystals and syrup, and dry the sugar crystals thus made, only to redissolve these same crystals in water when they are made into confectionery.

Much experimenting has been done in the search for a process, suited to the needs of the average plant, whereby raw sugar might be converted directly into white syrup, and which, in turn, might be boiled directly into confectionery products. Some manufacturers of decolorizing carbons have gone a step farther and prepared white syrups to be sold on sugar units. Such syrups are liquid, can be delivered in tank cars, and may be pumped to any floor in the plant. This is an ideal arrangement and should give excellent results in reducing floor space required for sugar storage, labor in handling and cost of melting. It must not be forgotten,

however, that results must be predicated upon the condition that such syrups be comparable with syrups made by melting granulated sugar in water.

## How White Syrup Is Made

Preparation of white syrup from raw sugar is a simple process, but one which must be understood if we are to arrive at definite conclusions as to the value of such syrup. In the first place, raw sugar crystals are covered with a molasses jacket (which accounts for color), and contain mechanical impurities which were not eliminated in the process of crystallization; it is necessary to remove these impurities if we are to make white sugar.

In the usual method of preparing white syrup from raw sugar, it is washed in a centrifugal machine, when the outer jacket of molasses and other mechanical impurities are thrown off. The grayish-white sugar crystals which remain are melted in water, mixed with the required amount of decolorizing agents, warmed to the proper temperature, and pumped through a filter press where carbon and other filtering media are retained on the cloths and the white syrup allowed to filter through. Provided these white liquors have been prepared properly, their clarity is all that can be desired, and their color compares favorably with syrups made from pure sugar and water. Being too dilute for commercial use, it is necessary to remove water from these syrups to a point just below where the sucrose will crystallize out, and which is approximately two-thirds sugar and one-third water by weight.

To compare syrups made in this manner with those made from pure sugar, it is necessary to review the process for making pure granulated sugar. The raw sugar is washed, melted, and filtered through the "char tower" or through a press in

a manner similar to that employed in making white syrups when vegetable carbons are used, but instead of evaporating off the excess water and marketing the resulting syrup, it is cooked to a grain and the sugar (sucrose) crystallized out. The resulting mass of sugar crystals and syrup is now placed in a centrifuge and the syrup "whizzed" off, leaving white sugar crystals behind.

The syrup eliminated by the centrifuge is repeatedly reboiled and lower grades of sugar crystallized out of it until, in the final windup, we have the soft yellow and brown sugars and refiner's syrup. In this latter syrup we find the substantial percentages of ash, non-sugars, and invert sugar which have been eliminated from the sugar during the process of manufacture.

These impurities were present in the first decolorized liquor, but their percentage was small compared to the percentage present in refiner's syrup. The percentage of ash has been increased by the natural process of removing sugar and leaving other materials behind. The invert sugar has been increased with each boil, and the non-sugars increased slowly by caramelization. Each of these impurities is present in the original white syrup when it is first made from raw sugar.

#### White Syrup from Raws Vs. Syrup from Refined

A comparison of white syrup from raw sugar with syrup made by melting pure sugar (sucrose) in soft water is the most important problem for our present consideration. In white syrups from raw sugar, we find notable percentages of invert sugar. Based on dry sugar weight, this generally reaches 2 per cent or more in commercial syrups,\* while in the syrup made by melting pure sugar in soft water we rarely find more than one-quarter of 1 per cent, and this is present in syrups of much higher density than the commercial white syrups from raw sugar.

Although we find that mineral matter has been greatly reduced in the white syrup from "raws," the small percentage remaining is sufficient to cause these syrups to act

*Probably every large confectioner, at times of high sugar prices, has dallied with the idea of refining his own sugars directly from raws. Manufacturers of refining equipment and producers of various types of carbons have encouraged the belief in its practicability as a means of extending their own somewhat limited markets. Did not Hershey do it?*

*The answer is that there is but one Hershey and there is grave doubt whether Hershey would enter the sugar-refining business if he had it to do over again. Mr. Stroud Jordan gives a complete and satisfying picture of the problems which must be overcome before the refining of sugars by individuals in other fields can be made a source of convenience and profit.—The Editor.*

differently. Another factor not to be overlooked is the presence of non-sugars in these syrups, which

although present in small quantities, nevertheless exert their influence on the resulting syrup. In the case of pure sugar melted in water, we have a solution in which invert sugar, mineral matter, and non-sugars are at a minimum, and which for all practical purposes may be disregarded, while in the syrup made directly from raw sugar by any one of the commercial decolorizing processes, notable percentages of each of these impurities will be found to have remained.

When sugar is bought in the market it is valued on its "polarization," which is a direct measure of its actual sucrose content, and a syrup made from pure sugar and a given quantity of water will always show a definite amount of each per gallon. When white syrup from raw sugar is delivered either in drums or in tank cars, it is sold on "degrees Brix" or "Baume," at a given temperature, and hence everything which increases the specific gravity of the syrup is sold as sugar. Thus we see that we are buying a syrup containing substances other than sucrose and paying the same price for it per unit that we would pay for an equivalent amount of pure sugar (sucrose), special or offsetting discounts not being taken into present considera-

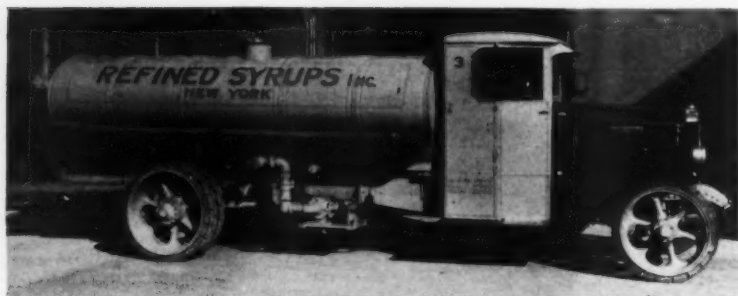


Both vegetable and animal carbons now employed in the purification of white syrups made from raw sugars. Here is a fresh supply of bone char being discharged into a char tower of the National Sugar Refining Company.

\*Commercial syrups have recently been produced with invert sugar contents of less than one-half of 1 per cent.



## WHITE SYRUP FROM RAW SUGARS



"Liquid Sugar Via Pipe Line" is the latest offering to the confectionery trade. The illustration shows a typical delivery wagon about to pump its cargo of white syrup to the storage tanks on the top of the building.

tion. The resulting differential is small, but cannot be completely ignored, especially when the syrup is purchased in tank car lots. Here we are valuing a sugar product on specific gravity and not on polarization.

### Present Uses of White Syrups

In preserving, canning, baking, ice cream, fountain syrups, and soft drinks, the small percentage of materials other than sucrose which is present in white syrups from raw sugar does not offer any unusual difficulties. The same applies to those confectionery operations in which slight discoloration is not objectionable or where artificial colors are subsequently to be used. A ready use for such syrups is apparent in these fields. Money may be saved by reducing labor charges, floor space, and cost of handling.

It is unfortunate that in the manufacture of confectionery high heat is more often required than in the other industries just mentioned, since heat causes the invert and non-sugars contained in these syrups to develop a yellow cast. In fondant boiling, hard candy manufacture, and in every instance where a high boil is required, this tendency to discolor remains to be reckoned with—which brings us back to the old adage: "To get the brightest goods requires pure sugar."

Another factor which should not be overlooked in this connection is the percentage of water present in white syrups from raw sugars. This percentage is materially higher than in the mix of water and sugar as melted in the ordinary confectionery boiling. This introduces a time factor in the operation which is in itself conducive to color development and extra cost of handling.

Research has made possible the production of better carbons, better sugars, and better processes. It is not doubted that further research will produce a syrup which is not only as good as one made by melting pure sugar in water, but also one which will show, as do the present commercial syrups, a decided economy in use. However, in order to make a thorough test of the white syrups available, sample lots were recently purchased in the open market, while others were made at home, and these were handled in an identical manner and at the same time as were syrups made by melting pure sugar in water. In each instance it was observed that where a batch of fondant was made from syrup in place of granulated sugar, it developed a yellow cast. This was to be expected, for everyone familiar with sugar handling knows that invert sugar will not long hold color at high heat and that non-sugars will develop color when handled under like conditions. It must be added, in fairness to the producers of these syrups, that constant progress is being made in the direction of low invert syrups, satisfactory batches of hard candy being said to have been made with them, but in no case within my knowledge has the resulting product been as white as that made from the best quality of granulated sugar, nor have the daily commercial runs of these syrups yet been able to approximate the strength and whiteness of the best experimental samples of these syrups as recorded in these columns some months ago.

### Obstacles to Private Refining

Should a confectioner desire to make white syrup from raw sugar himself, by any of the processes offered commercially, he must first

remember that his yield of white syrup from raw sugar will not be 100 per cent. In the washing of raw sugar as much as 15 per cent of the original sugar will be found to have been "whizzed" off into the molasses. It will be necessary for the confectioner to find either a use for this molasses or a profitable market for its sale. Since no candy plant can be expected to have need for the amount of molasses which would be produced in this manner were all sugar requirements to be taken care of with syrup, the sale of this by-product presents another problem. It is profitable to sell this molasses only if the amount available is sufficiently large to warrant its being offered in car lots, a fact which makes it necessary to enter into a communal agreement with other plants whereby their joint molasses production may be pooled.

It must also be borne in mind that a refinery, in order to make a profit, must be run continuously. Shut-downs result in large losses from soured water and general all around waste. Since it will be found difficult in a confectionery plant to regulate confectionery production so that a definite quantity of syrup will be required each day, the labor which is employed to handle the sugar refining process is not likely to be occupied at full time. Skilled labor of this character cannot be profitably transferred to other operations, even were it possible to have such an agreement.

It is not doubted that at some near future date a process will be developed, suitable for private plant operation, which will produce syrups of sufficient purity directly from the raw sugar, and that manufacturers will be in position to offer such syrups to users whose requirements are too small to make the installation of such a process profitable. In any case, to refine sugar requires the operation of a refinery, whether it be situated in or out of the plant, and to run a refinery means that uniform production must be maintained at all times. It is, therefore, necessary, before rushing headlong into the refining business, to first determine whether there is actual and continuous need for that quantity of syrup which will make it profitable to install and maintain the equipment required for its production.



# Invest Another \$100,000, Please

for effective fighting tools with which to wage war on the enemies of our industry

More Research and Educational Work needed to reach objectives this year

**T**HE need for Research work in the candy industry is most evident right now when we are under attack from the American Tobacco Company. Accurate knowledge and information, resulting from Research work, would be particularly valuable at this time," said President L. C. Blunt, of Denver, president of the National Confectioners' Association in commenting on the necessity for additional funds for the Advertising and Educational fund for the coming year.

The budget for 1929 is \$400,000 and Mr. Blunt has issued a direct appeal to members of the candy industry who have not made pledges to the Educational fund to do so now. Manufacturers who did not base their pledges on one-fifth of one per cent of annual gross sales have also been asked for increased contributions. Mr. Blunt's appeal is as follows:

*"I am making a personal and direct appeal to you as a member of our association to make a substantial contribution to the third year of our Advertising and Educational work. Our expanded program requires \$100,000 in new financing for 1929. We must have this additional money to insure the success of our Educational work.*

*"Contributions to the Educational and Advertising fund the past year totaled \$300,000. The budget for the coming year is \$400,000. Twenty-five manufacturers have so far contributed over one-half of all the money to our campaign. Other manufacturers have contributed liberally. Is it fair to ask them to carry all the burden of this activity that is for the benefit of the entire industry?"*

*"This additional money is needed for Research work, salary to Dr. Bundesen as Medical Director, additional publications including Good Housekeeping, McCall's and Normal Instructor, Educational work in the schools, films, 24-sheet posters, and to counteract the suggestions of a cigarette manufacturer to 'Reach*

*for a Lucky and not for a bonbon.'*

*"With united support and determined effort we can greatly increase candy consumption, if you and every other manufacturer will do their part. I am certain that we can depend upon you in this emergency.*

*"I earnestly urge you to come in with us in this effort to improve conditions in the Industry, as well as to protect it from vicious attacks, so that all may enjoy a more prosperous New Year."*

**Message from George Williamson**  
*Chairman of the N. C. A. Advertising Committee.*

**"O**UR expanded program for 1929 calls for greater co-operation and help! We must ask those in the candy industry who have the best interests of the industry at heart to double their co-operation and financial help.

"You must realize that the advertising of the National Confectioners' Association has at last hit its stride and is due for a renaissance—in the new theme, "Candy is good for you." We are making good on a promise for a real campaign, with a perfectly definite objective—meeting face to face all the prejudices that have existed against candy and answering them with a positive and thoroughly substantiated story of the goodness of candy as a food. We have laid before you four of the finished proofs of advertisements in this new campaign.

"The text in every advertisement has been thoroughly checked, read and approved by Dr. Herman N. Bundesen, whose views on candy you already know and whose authority is unquestioned. This campaign is absolutely impartial—equally effective for all candy makers of whatever kind. The reading matter is the big thing. In every instance the illustration is merely put there for display purposes to identify this as a candy advertisement, to make the advertisement attractive, appetizing and easy to read

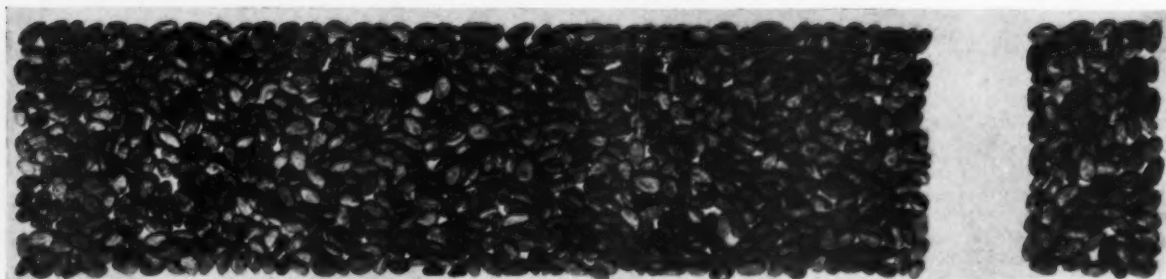
—but it is secondary to the story.

"This new campaign is designed to sell candy 365 days a year. Holidays are taken account of because they form a background for co-operative and individual effort on the part of retailers, but the central theme of the campaign is "eat candy, any good candy, regularly because it's good for you."

"Now, in order to give this story the widest distribution to the public, we have taken the magazine of largest circulation—the Saturday Evening Post with its twelve million readers. With this far reaching distribution of our story it is not sufficient of itself to do the job of educating the entire public. This campaign is planned as all Association campaigns should be planned, to form a background for your own advertising and promotion efforts. There is unquestionable material in this campaign that you can use to immense advantage in your own advertising.

"For some time to come the big job will be to build up this educational background—to get this story across to the greatest number of consumers. That's where the effort and the money are being put. You will agree with the settled policy of your advertising committee in spending its revenue this way—to do this one thing well. Countless activities, all good in themselves, are constantly clamoring for a share of the appropriation. No one questions the value of Broadcasting Posters and of certain other mediums which have been suggested. But we are going to turn a deaf ear until we get this educational job licked—or until we get enough money to do both.

"Will you, in your own advertising and merchandising activities, take account of this advertising plan and join us in telling the public that 'Candy is good for you?' Will you double your co-operation and help for the third year of our Educational work? If you have not made a contribution to our work, will you do so?"



"I sampled recently 1,000 beans of Summer's Arriba and found only 94 beans that were characteristically of Arriba aroma—" (see text).

Robert Whympers,  
Author of "Cocoa and Chocolate,"  
and international chocolate authority,  
urges coating manufacturers to

## BUY CACAOS BY BRAND

—and tells why the cocoa-maverick  
is a menace to chocolate quality

Being the third in a series of articles entitled "Chats on Chocolate"

BY ROBERT WHYMPERS

**E**VERY chocolate manufacturer knows that there are expensive, as well as cheap, cacao beans on the market, and it is rightly assumed that the more highly priced cacaos are scarcer than the cheaper. The reason for the scarcity of any particular type of cacao is not, however, always understood.

If we take, for example, Guayaquil, say Summer's Arriba, there is no obvious reason to most chocolate manufacturers why these should not be produced in quantity and so be lowered in price. But only recently, again, whilst I was in

Costa Rica, I met Señor Aspiazu, whose grandfather, I believe, was responsible for planting in Guayaquil a large acreage of the best Arriba cacao some fifty years ago, and I learned from him that it was quite a common experience now to plant, on new land, seeds from trees that had been producing the finest quality of cacao, only to find that the fine qualities were not reproduced. Indeed, it seems that there is, on the Aspiazu plantations, a comparatively small strip of land that will grow cacao of the desired high quality. I have, myself, seen the results of transplanting fine Venezuelan cacao to both Trinidad and Ceylon—neither case resulting

in cacao of the same aroma as the original. Similar disappointments have, of course, been experienced with other fruit trees and with tobacco, which have failed to reproduce the fine original or parental qualities when transplanted as seedlings or seeds to other countries.

### Soil and Climate Influence Chocolate Quality

It has been fairly established that particular soils and climates, influencing both the nature of nourishment absorbed by the plant and the speed with which the fruit matures, are more suitable than others for developing any specific quality of the crop under consideration. Certainly this is the case so far as the aroma of cacao is concerned.

It is, for example, hardly likely that the bulk of the Gold Coast cacao crop will ever be as fine in aromatic qualities as the best Guayaquils or Venezuelans, in spite of the great improvement shown since pre-war days. Such improvement as has been observed is due far more to better methods of fermentation and drying than to the planting of superior cacao stock. And the methods of fermenting and drying will be seen later greatly to influence the qualities of finished cacao.

Another reason for scarcity of the



The increasing tendency to brand the better qualities is a welcome aid to the selective buying of raw cocoas.



## THE MANUFACTURING CONFECTIONER

better cacaos lies in the fact that they are mostly of the Criollo stock, the most delicate of the three generic types commonly grown, Criollo, Forastero, and Calabacillo. Criollo trees are not only more delicate, more limited as to conditions of temperature and humidity, and more subject to disease, but they give less fruit than either of the others, of which Calabacillo is the hardiest and most prolific, with Forastero occupying an intermediate position.

Speaking generally of the cacaos of commerce, Criollo beans show the palest brown kernels, of mildest taste, and are the most pleasingly aromatic of the three varieties. Calabacillo beans have the darkest kernels, of most bitter and astringent taste, and have not any marked aromatic or characteristically fine qualities. Forastero again occupies an intermediate position in color, taste, and aroma. It is from Forastero stock that the bulk of cacao is obtained, and it is these beans that are mostly employed as the foundation or base for the majority of coatings and medium classes of chocolate.

### Buying Cocoa by Mark

It should perhaps be remarked that there occur on nearly all plantations trees obviously derived by cross-fertilization, hybrids that do not breed invariably true to either parental type, the offering of which often show cacao with all possible combinations of the parental qualities. It is, thus, sometimes very difficult to say what the exact type of cacao produced from such trees is going to turn out, and this is one reason why great variations are often observed in cacaos nominally from the same place at different seasons. Moreover, unless great care is spent in keeping the trees on plantations uniform, or unless careful blending of the cacao under a standard mark is made, all sorts of variations annoying to the chocolate manufacturers may occur. For this reason, the buyer for a chocolate factory should study marks or brands, and make a point of buying only those that show consistent uniformity and good quality. For example, I sampled recently a thousand beans of Summer's Arriba and found only 94 beans that were characteristically of Arriba aroma. Naturally such an experience makes

one cautious when buying high-priced cacao.

One of the chief causes of the increase on the market of cheap cacaos, apart from the manufacturer's mania for buying at the lowest possible price, is that, within small limits, both the quantity and quality of cacao butter capable of being expressed is the same from the cheapest as from the most expensive cacao, and the demand for cacao butter varies with the public demand for chocolate. And this fact, working in a vicious circle forces upon the consumer cocoa powders of the poorest grade and quality, and chocolates that should be better; otherwise the residue after the fat has been pressed out is a waste product which few manufacturers can afford to throw away.

In no branch of the cocoa and

chocolate industry is the inferiority of the cacao commonly employed so evident as in the production of cocoa powder. Cocoa powders are not usually artificially flavored and hence must rely for their pleasing qualities upon the natural aroma and taste of the roasted and pressed cocoa. The application of the Dutch process in the manufacture of cocoa powders only alters and does not enhance the natural cacao qualities so far as aroma and taste are concerned, so that the use of alkali will not convert an initially poor cacao into a fine finished cacao product as is often believed. The Dutch process was invented for quite another purpose—to prevent the powder from settling so quickly to the bottom of the cup, and to improve the color, the result of a partial emulsification and not of solubilizing. In-



A heavy-bearing tree of the Forastero variety. The average yield per tree is only about one pound of dried beans per season.

(Photo, courtesy United Fruit Co.)



## BUY CACAOS BY BRAND

—and they marvel at crime!



deed, the word "soluble" applied to "Dutch" cocoa powder is a misnomer for there is no apparent increase in solubility of a cacao so treated, except possibility of its additional mineral content.

### Cheap Beans Ruination of Beverage Cocoa Business

The falling off in consumption of

cocoa powder, or, in order to cover all possible criticism, let us say the lack of increase in popularity of cocoa powder as a hot beverage, is due to the fact that most cocoa powders are miserably poor things for flavor owing to the fact that low grade cacaos have been used in their manufacture. When, however, cocoa powders and their preparation for

soft drinks are considered—and here we undoubtedly have a steadily rising consumption in chocolate malted milk, etc.—we meet the same situation already discussed when we spoke of vanilla-soaked chocolates,\* and it can be frankly stated that a minimum of cocoa or chocolate flavor, overpowered by vanilla is what the public seems to like. I say "like" rather than "prefer" because the public is not given a preference.

The question naturally arises—Is chocolate the popular flavor, or is vanilla?—and again—We know vanilla is a popular flavor; is vanilla with a dash of chocolate flavor still more popular?

Personally, I do not believe that the natural flavor of cacao is as popular as it used to be because cocoa and chocolate preparations today are made largely from low grade cacao beans, and the public has been weaned away from naturally-flavored cocoa and chocolate by manufacturers who, for the sake of their own pockets, buy their cacaos in the cheapest markets.

\*In the December, 1928 issue of the *Manufacturing Confectioner*.

## COMING—

*In the February Issue of The Manufacturing Confectioner:*

### "The Origin and Identification of Off-Flavors in Cacao"

By ROBERT WHYMPER

(Part IV—Chats on Chocolate)

### "Children and Candy"

By ORVILLE H. KNEEN

(Part III—The Role of Candy in Science and Health)

### "Dovetailing Costs Into the Books"

By J. J. BERLINER

and

### "The Surprising Adventures of Sherwood Hutts"

A Full-Fledged Detective Story Based on Candy  
Factory Trouble-Shooting

By N. W. KEMPF

*Every one of these features is well worth the price of a year's subscription. Is there a subscription moocher in your factory? Send us his name, and we will do the rest.*



# The Three Generic Varieties of Cacao

*(A remarkably fine series of photos in which the cut beans show the successive darkening of color from the best to the poorest variety.)*



## Criollo

*(Lightest color and most delicate flavor, but hardest to raise and lowest yield. The finest flavor cocoas such as Javas, Porto Cabellas, etc., come in whole or in part from this stock.)*



## Forastero

*(And intermediate variety of darker color and stronger flavor—the bulk of the commercial cocoas are of this variety.)*



## Calabacillo

*(Darkest color and most bitter flavor; likewise the hardest and most prolific grower.)*

Photos, Courtesy United Fruit Co.



*The candy Clinic is conducted by one of the most experienced superintendents in the candy industry. Each month he picks up at random a number of samples of representative candies. This month it is holiday assorted chocolates; next month it will be \$1.50 assorted chocolates. Each sample represents a bona-fide purchase in the retail market, so that any one of these samples may be yours.*

*This series of frank criticisms on well-known, branded candies, together with the practical "prescriptions" of our clinical expert, are exclusive features of the M. C.*

## "Season's Greetings" —and all that

### Sample HD—No. 1

#### Holiday Greetings, 5 lb. \$2.00

(Manufactured in New York City.)

**Appearance of Package:** Attractive.

**Box:** No special wrapper. Blue lettering; Christmas scene in blue and green. Tied with plain red cord; size  $10\frac{1}{4} \times 7\frac{1}{4} \times 3\frac{3}{8}$  inches.

**Appearance of package on opening:** Neat layout, well packed; all pieces cupped. Six pieces foiled, silver and red foil. Two long sides had laces. Tray used for top layer.

**Chocolate Coating:** About 30% sweet.

**Gloss:** Good.

**Color:** Good.

**Taste of Coating:** Fair, slightly "sandy."

**Strokes:** Machine, neatly done.

#### CENTERS:

**Peanut Nougat:** Tasted very flat, although nougat was very good.

**Dark Cream:** No flavor could be identified. Fondant fair.

**Peppermint Cream:** Flavor and fondant texture both good.

**Orange Cream:** Flavor faint. Fondant fair.

**Caramel:** Tasted fair, but caramel stuck to the teeth.

**Lemon Cream:** Flavor and fondant good.

**Raspberry Cream:** Fondant good. Flavor bad, tasted as though rancid.

**Walnut Belmont:** Flavor and nut gave excellent taste but fondant dry.

**Coffee Cream:** Flavor fair; fondant tough and slightly dry.

**Pecan Belmont:** Flavor and nut good. Fondant tough.

**Apricot Jap Jelly:** Flavor fair. Jelly very tough.

**Assortment:** Too limited. Suggest a few more chewy pieces, also several marshmallows of different flavors.

**Workmanship:** Very good. Dipping, packing, etc., were all well done, showing that care was taken by this house even on cheap goods.

**Remarks:** On the whole this is one of the best boxes of this price class which the clinic has examined this year.

### Sample PW—No. 1

#### Xmas Package, 5 lb. \$1.50

(Manufactured in New York City.)

**Appearance of Package:** Cheap looking.

**Box:** Plain holly paper tight wrapped box, with cellophane window. No wrapper. Size  $11 \times 7\frac{1}{2} \times 2\frac{3}{8}$  inches.

**Appearance of goods on opening:** Even cheaper looking. Pineapple slice in center, eight pieces of foiled chocolate around pineapple. Red, blue and gold foil. Paper strips used. Tray for top layer. No cups.

**Packing:** Loose. Some pieces turned over and scratched.

**Chocolate Coating:** 20 to 25%. Sweet, of very cheap quality and distinctly "sandy."

**Color:** Too light.

**Gloss:** Hardly any.

**Strokes:** Machine, very poorly done.

**Taste of Coating:** None.

#### CENTERS:

**Chocolate Cream:** Fondant dry and tough. Tasted as though made from scrap.

**Pink Colored Cream:** Fondant tough and flavorless.

**Orange Cream:** Fondant tough. Flavor fair.

**Strawberry Jap Jelly:** Too hard; flavor fair.

**Caramel:** Cheapest kind of paste used and piece partly grained.

**Peppermint Cream with Walnut Top:** Fondant hard and dry. Flavor fair.

**Assortment:** Entirely too small.

**Workmanship:** The entire package was made up of the cheapest materials obtainable and the workmanship most careless.

**Remarks:** Of course, this is a very poor specimen to be flattered with the name of "chocolates," but at the price what can be expected? Doubtless there are still some people who will buy this sort of candy but it is evident that this type of holiday package is fast disappearing from the market. No name or address appear anywhere on the box, al-

## THE MANUFACTURING CONFECTIONER

though one can readily understand the manufacturer's reluctance to claim it as the product of his factory; the omission is a serious offense against the Federal labeling statutes and sooner or later will get him into no end of trouble.

### Sample NV—No. 1

#### Christmas Chocolates, 2½ lb. \$1.25

(Manufactured in Brooklyn, N. Y.)

**Appearance of Package:** A trifle cheap looking. Special Christmas wrap; red and white Santa Claus and Christmas tree, very crudely executed. Two seals on ends.

**Box:** Attractive looking; size 10x6x3¼ inches.

**Appearance of goods on opening:** Fair.

**Packing:** Loose. Some pieces turned over and scratched. All pieces cupped. No liner. Air buff mat used. Two pieces foiled, one silver and one gold.

**Chocolate Coating:** Sweet, about 30 to 35%.

**Color:** Fair.

**Gloss:** Fair.

**Strokes:** Good.

**Taste of Coating:** Good.

### CENTERS:

**M. M. Caramel:** Very little caramel. Mostly all marshmallow and not very good.

**Cherry Cream:** Fondant good, but flavor lacking.

**Plantation:** Good.

**Raspberry Cream:** Good.

**Orange Cream:** Good.

**Maple Cream:** Good.

**Nut Cream:** Fondant very tough and nuts cut too fine.

**Apricot Jelly Walnut:** Good.

**Peppermint Marshmallow:** Flavor good. Marshmallow too tough.

**Strawberry Cream:** Fair, imitation flavor.

**Orange Colored Cream:** Fondant good, but flavor could not be recognized.

**Peanut Cluster:** Good.

**Caramel:** Good; assorted nuts used.

**Sponge Chip:** Flavor, molasses; sponge good.

**Maple Walnut Cream:** Flavor and fondant good.

**Belmont Cream:** Good.

**Plain Vanilla Caramel:** Good.

**Vanilla Cream:** Fair, no flavor.

**Chocolate Cream:** Fair, but tasted as though scrap were used.

**Assortment:** Good. Suggest a nougat and another hard center.

**Workmanship:** Good.

**Remarks:** This box, at the price, is quite passable and compares favorably with other goods in this price class.

### Sample SF—No. 1

#### Holly Package, 2 lb. \$1.25

(Manufactured in Boston.)

**Appearance of Package:** Attractive and seasonable. Red wrap, gold and blue printing, green holly wreaths. Tight wrap, two large seals on ends. White moire wrap under holiday wrap; good printing job on blue and gold. Two seals on ends.

**Box:** White, no printing; plain embossed. Size 9¼x6¾x1¼ inches.

**Appearance of goods on opening:** Excellent.

**Packing:** Tight. All pieces cupped and in place. One moire liner used. Air buff mat, 2 pieces white foil, 2 pieces gold foil, balance plain chocolate.

**Chocolate Coating:** Sweet, about 35%.

**Color:** Good.

**Gloss:** Very good.

**Strokes:** Machine, but very well done.

## Is Your Holiday Package in This Picture?



Typical of the array of "Season's Greeting" chocolates which fall under the superintendent's knife in this month's Candy Clinic.

## CANDY CLINIC

**Taste of Coating:** Fair; coating slightly "sandy."

### CENTERS:

**Marshmallow:** Very good.  
**Caramel:** Strong taste of caramel cream and too chewy.  
**Butterscotch Cream:** Butterscotch had a good taste but was almost a liquid. Fondant short and "grainy"; no flavor.  
**Walnut Cream:** Good.  
**M. M. Fudge:** Good.  
**Peanut Nougat:** Nougat short and tasteless. Peanuts well roasted.  
**Chocolate Cream:** Good, fondant exceptionally good.  
**Date Nut Paste:** Very good.  
**Brazil Cream:** Very good.  
**Maple Walnut Cream:** Very good.  
**Lemon Cream:** Very good. No color used.  
**Vanilla Cream:** Fondant very good. Flavor none.  
**Pecan Cream:** Very good. Nuts cut too fine.  
**Cocoanut Cream:** Good.  
**Raspberry Nut Jelly:** Very good. Raspberry flavor one of the best I have tasted in some time.  
**Raspberry Cream:** Raspberry fruit used. Flavor and fondant very good.  
**Assortment:** Very good, in fact, far better than I have found in some dollar boxes.  
**Workmanship:** Carefully done and good judgment used.  
**Remarks:** This box for the price is exceptionally good and will make a large number of friends. Suggest a tray be used as one side of the box was too low.

### Sample CS—No. 1

**Season's Greetings, 5 lb. \$1.50**  
 (Manufactured in Boston.)

**Appearance of Box:** Very good. Red ribbon used.  
**Box:** Blue and red, old-fashioned scene, neatly executed. Size 14x10½ x2 inches. No special wrapper used. Box wrap highly glazed.  
**Appearance of box on opening:** Very good. No liner. Two trays and two partitions used on top layer. Pieces all cupped and every piece in place. Six fancy foiled pieces.  
**Chocolate Coating:** About 20 to 25% sweet coating.  
**Gloss:** Very good.  
**Color:** Good.  
**Taste of Coating:** Fair, a trifle "sandy."  
**Strokes:** Good.

### CENTERS:

**Vanilla Cream:** Tasteless. Fondant grained, partly dry.  
**Strawberry Jelly:** Tasted fair. Jap jelly good.  
**Butterscotch:** Texture good, hardly any flavor.  
**Caramel:** Good.  
**Orange Color Cream:** No flavor. Fondant good.  
**Cocoanut Taffy:** Cocoanut very hard. No taste.

## THE CANDY CLINIC

R

*The "holiday chocolates" business may come but once a year but the purchaser's memory of a good box of candy is much longer than that.*

H. D.  
SUPERINTENDENT

**Coffee Cream:** Good.  
**Lemon Cream:** Flavor faint, fondant good.  
**Roman Punch Cream:** Good. Flavor too strong.  
**Strawberry Cream:** Flavor bad. Fondant good.  
**Marshmallow Fudge:** Good.  
**Vanilla Cream, Pecan Top:** Flavor, hardly any. Fondant good.  
**Peanut Nougat:** Good.  
**Workmanship:** Good.

**Remarks:** This package of candy, at \$1.50 for 5 lbs., is unusually good. It is a large, attractive box and from reports obtained from retail merchants, it enjoyed a good sale.

### Sample KB—No. 1

**Christmas Chocolates, 2½ lb. \$1.25**  
 (Manufactured in Springfield, Mass.)

**Appearance of Package:** Very neat and attractive. Tied with red ribbon.  
**Box:** No special wrapper. Red printed snow scene. Extension top and bottom. Size 12x7x2 inches. Lace on two sides.  
**Appearance of box on opening:** Fair. Three pieces were broken. Packed too loose, some pieces turned over and scratched. Four foiled pieces used, red, green, white and gold foil.  
**Chocolate Coating:** Sweet, about 30% used.  
**Gloss:** Fair.  
**Color:** Good.  
**Taste of Coating:** Good for this price class.  
**Strokes:** Fair, some poorly done.

### CENTERS:

**Orange Cream:** Flavor fair; fondant good.  
**Coffee Cream:** Flavor good; fondant good.  
**Nougat:** Very bad; dry, short and tasteless.  
**Chocolate Caramel:** Tasted as though scrap were used and was partly grained.  
**Strawberry Cream:** Flavor fair; fondant good.  
**Peppermint Cream:** Flavor good; fondant slightly dry.  
**Vanilla Caramel:** A very poor piece of candy; tough, hard and of poor taste.  
**Maple Nut Cream:** Flavor bad; fondant fair.  
**Vanilla Cream:** Could not taste any flavor; fondant dry.  
**Sprinkled Cream:** Vanilla flavor good. Fondant very good.  
**Workmanship:** Dipping seemed to have been rushed as it was all more or less carelessly done. Centers were poor, indicating carelessness in the manufacturing department.  
**Assortment:** Too limited. Needs a good nougat, plantation or a chewy piece or two. Also a few hard centers.  
**Remarks:** This box is not up to the standard for this price class. The packing was poor and the box too large. The bottom layer was in bad condition, many of the pieces being scratched or broken and most of them lying either turned over or upside down.

### Sample UC—No. 1

**Family Package, 2½ lb. 99c**  
 (Manufactured in Boston.)

**Appearance of Package:** Very plain, no Christmas wrap. Red ribbon.  
**Box:** Plain white with red printing. Size 11x7x1¾ inches.  
**Appearance of box on opening:** Fair. All pieces cupped. Five pieces silver foiled. No liner. Tray used for top layer.  
**Chocolate Coating:** Sweet, about 25%.  
**Gloss:** Good.  
**Color:** Too dark.  
**Taste of Coating:** Hardly any; a trifle gritty.  
**Strokes:** Fair.

### CENTERS:

**Cherry Cream:** Good.  
**Strawberry Cream:** Flavor fair. Fondant good.  
**Peppermint Cream:** Flavor and fondant good.  
**Orange:** Flavor and fondant good.  
**Nougat:** Good texture and honey flavor. Almonds used.  
**Cocoanut Cream:** Good.  
**Caramel:** Good.  
**Vanilla Cream:** Good.  
**Workmanship:** Fair.  
**Assortment:** Too small. Suggest that a few hard centers and chewy pieces be added.  
**Remarks:** This is the best box I have examined in this price class.





# How Much and How Good!

In which the Clinic Superintendent administers  
a needed "curtain lecture" to certain prominent  
manufacturers of holiday chocolates

*—and compares their products with what  
others are doing for as little money*

BY ERIC LEHMAN

GETTING out a 2½, 3 or 5 lb. box which will look well and yet retail at prices ranging from \$1.00 to \$1.50 or \$2.00 is a problem which will give the best cost department in the industry something to think about. Yet there is no doubt about there being a big demand for this type of goods around the holiday season. In order to corral some of this business we must either make a go of it at these levels or sit on the sidelines until after Christmas.

To appeal to this once-a-year trade, the box must be big and have a "flashy" wrap or box top. Two layer boxes make the largest spread and that is what we need. But that does not mean that the contents need be poor in quality. There is enough latitude between the costs of the different types of centers to permit the use of good ingredients in the most inexpensive assortments.

## "Seasons Greetings" in the Rough

In examining some of these packages, I could not help but be struck by the irony of the phrase "Season's Greetings." Some of this candy ranks with the crudest and most tasteless I have ever eaten. In many cases, the packing was bungled also. The simple matter of a plain chipboard tray for the top layer was overlooked in some cases. All boxes without trays were in bad condition, the pieces being broken, scratched and piled up at one end of the box.

The workmanship in most cases was poor also. Even if the work has to be rushed, a little care must still be taken. The idea seemed to be to get the candy into the boxes regardless of how it looked. No consideration was given either to its appearance or to the condition in which it might reasonably be ex-

pected to reach the retailer. The main idea was to "get it out."

## Some Ledger Arithmetic

While the chocolate coatings were on the whole about as good as might be expected, again the workmanship was careless. The need of a little watching was indicated, as in some instances some of the pieces in an assortment would run as high as 35 per cent to 40 per cent coating while others in the same package would have as little as 20 per cent. Unless the enrobers are watched pretty carefully during the manufacture of this class of goods, at the end of the run one is very apt to finish up on the wrong side of the ledger.

Apart from two packages which stood out as models of what might be done for little money, the centers of all packages were of needlessly poor quality. Flavors were either insufficient or entirely lacking. Granted that the more expensive natural flavors cannot be used in this class of goods because of price, is it not possible to use pleasing artificial flavors in sufficient quantity to at least flavor the candy and make it palatable?

The fondant, with few exceptions, was also poor. Why not be a little careful with the cooking and cooling? It is as easy to make a nice smooth fondant as it is to make a dry, tough fondant. All that is required is a little care and close watching on the part of the foreman in each department. Even if you are running as high as 40 per cent corn syrup, it can be cooked so

that it will at least be soft. Cheap labor is all right in its place, but have a well paid foreman at the head of your cream room, as well as the enrober and packing room. They will save you money in the end, and give you a better grade of goods.

## The Versatile Cream Center

It should be possible also to get away from the idea that a cheap assortment must be made up of 90 per cent of cream centers. There are any number of good centers of the hard and chewy varieties, which can be produced at no higher cost than creams. It may require a little more trouble to make these pieces but you will have a better box of candy and stand a better chance of building up a permanent "Season's Greetings" business.

In speaking to a number of retail store managers, there seems to be a demand for a 2 pound box to retail around 50c or 60c. It might not be a bad idea to get your cost department busy on it for next year.

## Harry Friend at New Address

Harry Friend, manufacturer of the Friend Plastic Center Machine, is holding open house in his new quarters at 52 India Street, Boston, where he has a well-planned arrangement of office, display room, with suitable facilities for all demonstrations of his various machines, a consulting room and an experimental laboratory.

A very interesting and instructive exhibit depicts the evolution of the "Hand-Roll" machine, from the original Friend Machine, which made one center at a time, to the latest model handling a 200-pound batch of fondant, depositing 216 centers simultaneously, and capable of producing 4,000 to 5,000 pounds per day. Just another instance of the tremendous advancement typical throughout the confectionery industry in production methods.

Friend says that "the latch-string is always out."



**T**HIS digest of state laws related to the manufacture of candies makes up one section of the "Sanitary Manual for the Confectionery Industry." Other sections will be published in succeeding numbers of this magazine.

(Continued from December Issue)

## MONTANA

1921—*Pure Food Law* essentially like Federal Code.

*Sanitary Regulations:* Code provides for regular inspections to carry out provisions of the Pure Food and Drug Law, as follows:

Each confectionery must be inspected by the local or county health officer or his deputy of the district in which such place is located at least once each month. Special inspections must be made when ordered by the Secretary of State Board of Health.

*Method of Inspecting:* Score cards provided the inspector with instructions. After inspection the card must be signed by the person in charge of the premises, in whose presence the inspection was made. Reports must be forwarded to the State Board of Health.

The State Board of Health is also empowered to adopt and promulgate rules and regulations relative to the sanitary management of confectioneries.

Confectioneries specifically mentioned.

State Board of Health responsible for enforcement.

## NEBRASKA

1922—*Pure Food Law* essentially like the Federal Code.

*Sanitary Regulations:* Code specifically includes confectioneries. Essentially like California law.

State Department of Agriculture responsible for enforcement.

## NEVADA

1919—*Pure Food Law* essentially like Federal Code.

*Sanitary Regulations:* No general sanitary code. Commissioner appointed by Board of Control of State Agricultural Experiment Station is empowered to make uniform rules and regulations for the sanitary inspection of any place where confectionery is manufactured. Confectioneries specifically included.

Board of Control of State Agricultural Experiment Station responsible for enforcement.

# Digest of State Laws

CAREY P. McCORD, M. D. and Staff

of the

Industrial Health Conservancy Laboratories

Collaborating

*The Proposed Sanitary Code falls roughly into two divisions: (1) that portion of it which has been made mandatory by reason of existing legislation, and (2) that portion whose voluntary acceptance is prescribed by enlightened public opinion. The latter precedes the former in point of progress since it is on this that future laws are based. The present installment, however, is concerned with those details of factory sanitation and personal hygiene which are already exacted of the confectioner by the laws and regulations of the various states and municipalities in which the candy is made or sold. Ignorance of these laws is no excuse for violation of their provisions, hence the present attempt to codify these laws in a single manual for the benefit of the conscientious manufacturers who are anxious to comply with the requirements but do not know just where to begin to look for the necessary information.*

## NEW HAMPSHIRE

1926—*Pure Food Law* essentially like Federal Code.

*Sanitary Regulations:* Confectioneries included as a food product.

Limited code as follows:

1. State Board of Health may employ inspectors to investigate food manufacturing process and local sanitary conditions.

2. Unsanitary conditions forbidden. These are defined as follows:

a. If the floors, side walls and ceilings are not properly constructed and maintained.

b. If food in the process of production or storage is unnecessarily exposed to flies, dust or dirt or the products of decomposition or fermentation.

c. If any person is permitted to use as a sleeping room any place where food is prepared.

d. If any employer shall knowingly permit any person who is affected with tuberculosis or any other communicable disease to work in such place.

e. If there is any other condition

or practice which endangers the wholesomeness of food.

State Board of Health responsible for enforcement.

## NEW JERSEY

1910—*Pure Food Law* essentially like Federal Code.

*Sanitary Regulations:* General Sanitary Code specifically includes confectioneries. Similar to California law.

State Board of Health and Municipal Board of Health responsible for enforcement.

Special Bakery and Confectionery Labor Laws include following noteworthy provisions:

1. Every confectionery shall have air shafts, windows, or ventilating pipes sufficient to insure ventilation and sufficient light to prevent any place being operated entirely by artificial light.

2. All doors and windows shall be thoroughly screened so as to prevent the entrance of flies or other insects between the first day of April and 31st of October.

3. Smoking, snuffing or chewing of tobacco is prohibited.

4. Rooms used for the purpose of manufacturing confections only shall be seven feet high.

5. Every room shall have an impermeable floor constructed of wood properly saturated with linseed oil



# awn Sanitation

## Section III of a SANITARY CODE Submitted to the Confectionery Industry by The Manufacturing Confectioner

or of cement or other suitable material.

6. All interior woodwork shall be kept well oiled or painted with oil paint.

7. No domestic animal except cats shall be allowed to remain in any such room.

8. Every such room shall be kept clean at all times and free from rats, mice and vermin.

9. Manufacturers shall provide proper washing facilities which shall include sufficient supply of hot water, clean towels, soap and nail brushes.

10. Outer clothing shall be made of washable material.

11. The Commissioner may in his discretion order metal lockers for storage of outer garments.

12. Visits from inspectors are required at least once in three months or whenever he receives complaint in writing from an employee or labor union representative.

13. No persons under the age of sixteen years shall be employed or allowed or permitted or required to work between the hours of seven o'clock in the afternoon and seven o'clock of the forenoon following; no employee in any such place shall be required, permitted or suffered to work in any such place more than sixty hours in any one week or more than ten hours in any one day.

State Department of Labor responsible for enforcement.

### NEW MEXICO

1915—*Pure Food Law*. Adulteration of foodstuffs prohibited. No specific mention of confectionery except as implied by definition of term "food."

*Sanitary Regulations*: Confectioneries not specifically included.

1921—State Department of Public Welfare has supervision over the health of the people and possesses all powers necessary to fulfill duties prescribed by law with respect thereto.

This department has power to in-

vestigate, control and abate the effect of employments upon the public health; to inspect industries; to regulate sanitation in factories.

Limited regulations promulgated by the department for the sanitation of foods and food handling with reference especially to floors, screenings, washing facilities, health of employees.

State Department of Public Welfare responsible for enforcement.

### NEW YORK

1923—*Pure Food Law* essentially like Federal Code.

*Sanitary Regulations*: Confectioneries specifically included. Code contains only the following provisions:

1. Every confectionery shall be kept in a sanitary condition and properly lighted and ventilated, and the candy protected from contamination.

2. Every basement or cellar used as a confectionery shall be not less than seven feet high measured from the surface of the finished floor to the underside of the ceiling.

State Commission of Agriculture and Markets responsible for enforcement.

1924—*Special Labor Laws* for bakeries and manufacture of food products contain the following provisions:

1. A confectionery shall have proper and sufficient drains, sinks, clean running water, and properly ventilated water closets.

2. No person shall use or be permitted to use tobacco in any form in a confectionery or room where the raw material or manufactured product is stored or sold.

3. Every person while engaged in the manufacture and handling of

confectionery products shall wear a clean suit and clean shoes or slippers. The suit shall be of washable material and used for that work only.

4. No person shall establish or operate a confectionery without a sanitary certificate. The certificate shall be kept posted in a conspicuous place in the confectionery.

State Department of Labor responsible for enforcement.

### NORTH CAROLINA

1919—*Pure Food Law* essentially like Federal Code.

*Sanitary Regulations*: 1924—No general sanitary code. Special code for ice cream factories, creameries, butter and cheese factories only.

Department of Agriculture responsible for enforcement.

### NORTH DAKOTA

1913—*Pure Food Law* essentially like Federal Code.

*Sanitary Regulations*: Code includes foods which by definition includes confectionery. Limited general regulations.

Some noteworthy provisions:

1. Buildings, shelves, machines and other facilities should be designed and well adapted for the purpose with strict regard for the principles of sanitation.

2. Persons and clothing of all employees shall be clean and when possible the personnel of such place shall be provided with special outer garments, aprons, white coats and other apparel for use during hours of employment.

3. Provisions for lighting, ventilation, wash facilities, towels, etc., shall be ample and subject to the approval of State Food Commissioner and Chemist or his Agent.

State Food Commissioner and Chemist responsible for enforcement.

### OHIO

1926—*Pure Food Law* essentially like Federal Code.

*Sanitary Regulations*: Code entitles Secretary of Agriculture and District Board of Health to make rules and regulations with reference to sanitation in food factories. This by definition includes confectioneries.

*Sanitary Regulations for Candy Factories and Confectioneries*.

Noteworthy provisions: Rooms that cannot have at least one square





foot of window space, exposed to natural light, unobstructed for a distance of ten feet, for every ten square feet of floor space, or which do not have adequate ventilation, shall not be used.

Garbage and all waste material subject to decomposition must be removed daily to the outside and deposited in a can provided exclusively for this purpose and made of impervious material, and provided with a tight fitting cover. Covers must be kept on cans at all times, except when depositing or removing material.

Doors and windows, and other openings of every workroom shall be screened during the fly season, from May 1st to October 15th, with screens not coarser than 12 mesh wire gauge.

Compartments containing not more than two water closets or their equivalent shall be located in an apartment containing windows placed in the external walls of the building, or shall be provided with a mechanical means of ventilation which will change the air at a normal temperature at least six times per hour. Compartment containing more than two water closets or their equivalent shall be located with a gravity or mechanical system of ventilation which will change the air at normal temperature not less than six times per hour; or, may be placed in a compartment without windows in the external wall of a building, providing a mechanical system of ventilation is installed which will change the air at normal temperature not less than six times per hour.

Ventilation from toilet rooms shall be separate and distinct and have no connection whatever with the other ventilating ducts in the building.

Proprietors or managers shall require any person or persons working in or around a candy factory or confectionery to submit to a physical examination and to produce a certificate from the physician making such examination, that such person is free from contagious or infectious disease.

Female employees shall also wear washable caps.

Suitable means and appliances shall be provided for the proper cleansing or sterilizing of containers, cans, pails, tools and other uten-

## The Sanitary Code

sils, and they shall be thoroughly cleansed and scalded with boiling water, etc., or sterilized with steam.

State Department of Agriculture responsible for enforcement.

### OKLAHOMA

1921—*Pure Food Law* essentially like Federal Code.

*Sanitary Regulations:* Code includes limited provisions for sanitation in confectionery. No noteworthy provisions. Confectioneries specifically mentioned.

State Department of Health responsible for enforcement.

### OREGON

1920—*Pure Food Law* essentially like Federal Code.

*Sanitary Regulations:* Code specifically includes confectioneries.

Provides that all confectioneries shall be properly lighted, drained, plumbed, ventilated and kept and maintained in a clean, healthful and sanitary condition.

"Clean," "healthful" and "sanitary" defined as follows:

1. Proper protection of food-stuffs.
2. Disposal of wastes.
3. Daily cleansing of utensils, etc.
4. Adequate toilet and wash facilities.
5. Clean clothing of employees.

Usual provision for building construction, screening, etc., are included.

State Dairy and Food Commissioner responsible for enforcement.

### PENNSYLVANIA

1920—*Pure Food Law* essentially like Federal Code.

State Dairy and Food Commissioner responsible for enforcement.

*Sanitary Regulations:* 1926—Regulations for general industrial sanitation, lighting, ventilating, etc., typical of other such laws, but confectioneries not mentioned.

Code also includes extensive provisions with reference to employment of diseased persons in restau-

rants, hotels, etc., but confectioneries are not included.

Following special labor provision only one, including confectioneries specifically:

No employe shall be required or permitted to work in a confectionery more than six days in any one week; said week to commence Sunday not before six o'clock post meridian and to terminate at the corresponding time on Saturday of the same week.

State Department of Labor responsible for enforcement.

### RHODE ISLAND

1923—*Pure Food Law* essentially like Federal Code.

State Food and Drug Commissioner responsible for enforcement.

*Sanitary Regulations:* Confectioneries specifically included.

Provisions similar to the California law, with following noteworthy items:

1. Foodstuffs must not be placed on the floor in a confectionery.

2. No label shall be stuck on with gum, saliva or material other than the article itself.

3. Confectioneries are to be inspected twice yearly. If not found to be in satisfactory condition, the inspector can order the person in charge to cease operating until the factory is properly cleaned.

State Factory Inspector responsible for enforcement.

### SOUTH CAROLINA

1924—*Pure Food Law* essentially like Federal Code.

Commissioner of Agriculture responsible for enforcement.

*Sanitary Regulations:* No sanitary code for factories in general or confectioneries in particular.

### SOUTH DAKOTA

1925—*Pure Food Law* essentially like Federal Code.

*Sanitary Regulations:* Sanitary code includes confectioneries specifically. Similar to the California law.

State Food and Drug Commissioner responsible for enforcement.

In addition State Board of Health is empowered to enact regulations for industry with reference to the public health.

### TENNESSEE

1917—*Pure Food Law* essentially like Federal Code.





State Commissioner of Agriculture responsible for enforcement.

*Sanitary Regulations:* Code specifically includes confectioneries. Similar to the California law.

State Department of Labor and State Department of Agriculture responsible for enforcement.

## TEXAS

1925—*Pure Food Law* essentially like Federal Code.

*Sanitary Regulations:* No general sanitary code.

Special provisions as follows:

1. No candy factory shall employ any person infected or affected with any infectious or contagious disease; or any person who at the time of employment had not in his possession a certificate from a reputable physician attesting to the fact that said person is free from any infectious or contagious disease; or shall fail to have medical examinations made of all employees at intervals not to exceed six months; and after examinations shall fail to discharge any person found to be infected.

2. Members of the State Board of Health are permitted to enter any factory for the discovery and suppression of disease and for the enforcement of the rules of the sanitary code or of any health law or sanitary law.

3. Sanitary code prohibits employment of any person residing in a house where there is a reportable disease until said person has a certificate from a local health authority.

State Department of Health responsible for enforcement.

## UTAH

1926—*Pure Food Law* essentially like Federal Code.

*Sanitary Regulations:* No general sanitary code. Only limited regulations.

Confectioneries specifically mentioned as follows:

Every owner, etc., of a confectionery who shall fail to keep such place clean or in good sanitary condition, or who shall employ any person afflicted with tuberculosis, syphilis, or any communicable disease shall be guilty of a misdemeanor.

State Dairy and Food Commissioner responsible for enforcement.

# The Sanitary Code

## VERMONT

1917—*Pure Food Law* similar to the Federal Code with the following addition:

A person or corporation that furnishes or sells candy containing intoxicating liquors or flavored in a manner to imitate the taste of intoxicating liquor shall be fined, etc.

*Sanitary Regulations:* Code includes confectioneries specifically. Provisions more limited than California law but essentially similar.

The following provisions are noteworthy:

1. An establishment . . . shall be constructed with strict regard for the health of the employees and for the purity and wholesomeness of the food therein produced.

2. Refrigerators, garbage and refuse cans should be washed in hot water with soap or soda and rinsed at least weekly.

State Board of Health responsible for enforcement.

## VIRGINIA

1924—*Pure Food Law* essentially like Federal Code.

*Sanitary Regulations:* 1926 Code specifically includes confectioneries. Similar to California law.

State Dairy and Food Commission responsible for enforcement.

## WASHINGTON

1922—*Pure Food Law* essentially like Federal Code.

*Sanitary Regulations:* No general sanitary code. Specific codes applying only to bakeries, dairy products, etc.

Director of Agriculture responsible for enforcement.

## WEST VIRGINIA

1923—*Pure Food Law* essentially like Federal Code.

*Sanitary Regulations:* No general sanitary code. Commissioner of Health has limited powers with reference to sanitary regulations of factories in general.

Commissioner of Health responsible for enforcement of *Pure Food Law* and any sanitary regulations.

## WISCONSIN

1925—*Pure Food Law* essentially like Federal Code.

Contains special reference to chocolate products. (See Massachusetts Law.)

*Sanitary Regulations:* Code specifically includes confectioneries.

Extensive code similar to California law, with the following noteworthy additions:

1. Water closets, etc., shall be so arranged that gases or odors from these cannot enter any room where candy is manufactured or stored; such closets shall be equipped with efficient material or mechanical means of removing odors, etc., into the outer air.

2. Confectioneries shall be provided with a separate place to enable the workmen to change their clothes and keep same in a proper condition.

3. The walls and ceilings of such rooms as are used for the manufacture or storage of confections shall be whitewashed at least as often as once in six months, or in lieu of such whitewashing, walls or ceilings may be painted once in two years and scrubbed at least once in six months.

4. All persons engaged in confectionery establishments shall provide themselves with caps and slippers or shoes, and an external suit of washable material.

5. No new confectionery establishment shall be established or operated in a room the floor of which is more than five feet below the level of the street, sidewalk or adjacent ground or in a room the ceiling of which is less than eight feet high from the floor.

Dairy and Food Commissioner responsible for enforcement.

## WYOMING

1920—*Pure Food Law* essentially like Federal Code.

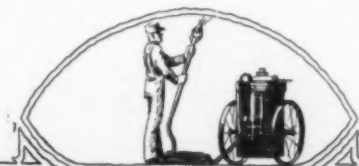
*Sanitary Regulations:* Code specifically includes confectioneries. Provisions somewhat more limited than California code.

Department of Agriculture responsible for enforcement.

## FEDERAL CODE

Federal Food and Drugs Act 1906.

Sec. 1. That it shall be unlawful for any person to manufacture any article of food which is adulterated or misbranded within the meaning of this act.



## DIGEST OF STATE LAWS ON SANITATION

Sec. 7. That for the purposes of this act an article shall be deemed to be adulterated.

In the case of confectionery:

If it contains terra alba, barytes, talc, chrome yellow, or other mineral substance or poisonous color or flavor or other ingredient deleterious or detrimental to health or any vinous malt or spirituous liquor or compound or narcotic drug.

In the case of food (see Rules and Regulations below):

1. If any substance is mixed and packed with it so as to reduce or lower or injuriously affect its quality or strength.

2. If any substance has been substituted wholly or in part for the article.

3. If any valuable constituent of the article has been wholly or in part abstracted.

4. If it be mixed, coated, colored, powdered or stained in a manner whereby damage or inferiority is concealed.

5. If it contains any added poisonous or other added deleterious ingredient which may render such article injurious to health. Provided that when in the preparation of food products for shipment they are preserved by any external application applied in such manner that the preservative is necessarily removed mechanically or by maceration in water, or otherwise, and directions for the removal of said preservative shall be printed on the covering of the package; the provision of this act shall be construed as applying only when said products are ready for consumption.

6. If it consists in whole or in part of a filthy, decomposed or putrid animal or vegetable substance or any portion of an animal unfit for food, whether for manufacture or not, or if it be the product of a diseased animal or one that has died otherwise than by slaughter.

Sec. 8. That the term misbranded as used herein shall apply to articles of food the package or label of which bears any statement or design or device regarding such article or the ingredients or substances contained therein which shall be false or misleading in any particular and to any food product which is falsely branded as to the state, territory or country in which it is manufactured.

That for the purposes of this act an article shall also be deemed to be misbranded, in the case of foods:

1. If it be an imitation of or

### Contents of SANITARY MANUAL for the Confectionery Industry

#### SECTION I—General Statement of Scope and Purpose of a Non-Label, Voluntary Confectionery Sanitary Code.

#### SECTION II—Glossary of Terms Utilized in This Confectionery Sanitary Code.

#### SECTION III—Digest of State Laws and Regulations in Force at the Time of the Preparation of this Confectionery Sanitary Code, as of January, 1928.

#### SECTION IV—General Provisions and Stipulations of The Confectionery Sanitary Code.

#### SECTION V—Building Construction, Equipment and Sanitary Maintenance.

- |  |  |
|--|--|
| (a) Lighting                             | (n) Stairways—Treads—Steps   |
| (b) Ventilation                          | (o) Elevators  |
| (c) Temperature—Humidity and Air Control | (p) Fire Escapes—Exits—Signals—Fire Walls—Fire Doors—Electrical Installations—Etc. |
| (d) Heating                              | (q) Screens (Window and Doors)   |
| (e) Refrigeration                        | (r) Janitor Service  |
| (f) Drinking Water Facilities            | (s) Control of Expectoration   |
| (g) Plumbing and Drainage                | (t) The Collection and Disposition of Waste  |
| (h) Washing and Bathing Facilities       | (u) Eradication of Rats and Vermin   |
| (i) Toilets                              |  |
| (j) Lockers                              |  |
| (k) First Aid Room                       |  |
| (l) Cafeterias—Lunch Rooms               |  |
| (m) Floors—Walls—Ceilings                |  |

#### SECTION VI—Sanitary Standards for Raw Materials

- |                                |  |
|--------------------------------|--|
| (a) Water                      | (h) Nuts   |
| (b) Milk                       | (i) Chocolate, Cocoa, Fruit Extracts (including vinegar), coloring matter, Gelatin Extracts, Syrups, Flavoring, Honey, Eggs, Sugar, Etc. |
| (c) Milk Powders               |  |
| (d) Plain Condensed Milk       |  |
| (e) Evaporated Milk            |  |
| (f) Plain Whole Condensed Milk |  |
| (g) Sweetened Condensed Milk   | (j) Fats, oils, etc.   |

#### SECTION VII—The Renovation and Sanitary Protection of Confection Moulding Materials, Such as Starch.

#### SECTION VIII—Adulterants and Adulteration

#### SECTION IX—Sanitation for Machinery and Utensils

- |  |   |
|--|---|
| (a) Classification and Definition of Confection Machinery and Utensils | (e) Avoidance of Specified Metals in Confection Manufacture |
| (b) Hand Utensils  | (f) Mechanical Safeguarding of the Confectionery            |
| (c) Cooking and Cold Mix Apparatus                                     | (g) New machinery   |
| (d) Fabrication Machinery  |   |

#### SECTION X—Sanitary Code Requirements with Reference to Employees Making or Handling Confections or Confectioner's Materials.

#### SECTION XI—Personal Hygiene Standards and Provisions.

- |                        |                           |
|------------------------|---------------------------|
| (a) Uniforms           | (c) Meals (lunches, etc.) |
| (b) Bodily Cleanliness |                           |

#### SECTION XII—Sanitation of Materials in Process.

- |   |   |
|---|---|
| (a) Materials Awaiting Further Processing | (c) Re-use of Partially Prepared Products |
| (b) Re-use of Discarded Products          |   |

#### SECTION XIII—The Finished Product

- |                                   |  |
|-----------------------------------|--|
| (a) The Finished Unpacked Product | (d) Sanitary Inspection of Finished Product  |
| (b) Containers                    | (e) Transportation of Confections            |
| (c) Labeling of Finished Product  | (f) Storage and Re-Handling of Confectionery |

#### SECTION XIV—Legal Requirements

#### SECTION XV—Sanitary Inspection for Confectionery Factories and Storage

- |                         |             |
|-------------------------|-------------|
| (a) Procedures          | (c) Grading |
| (b) Sanitary Score Card |             |

#### SECTION XVI—Index.

## THE MANUFACTURING CONFECTIONER

offered for sale under the distinctive name of another article.

2. If it be labeled or branded so as to deceive or mislead the purchaser or purport to be a foreign product when not so, or if the contents of the package as originally put up shall have been removed in whole or in part, and other contents shall have been placed in such package, or if it fail to bear a statement on the label of the quantity or proportion of any morphine, opium, cocaine, heroin, alpha or beta eucaine, chloroform, cannabis indica, chlorad hydrate, or acetanilid or any derivative or preparation of any such substances contained therein.

3. If in package form the quan-

tity of the contents be not plainly and conspicuously marked on the outside of the package in terms of weight, measure or numerical count.

4. If the package containing it or its label shall bear any statement, design or device regarding the ingredients or the substances contained therein which statement, design or device shall be false or misleading in any particular.

Rules and Regulations for Enforcement.

Sec. 7. The term "food" includes articles used for confectionery. The provisions of the act relating to food as well as the specific provisions relating to confectionery apply to confectionery.

### Definitions and Standards for Food Products.

"Candy" is a product made from saccharin substance or substances with or without the addition of harmless coloring, flavoring or filling materials, and contains no terra alba, barytes, talc, chrome yellow or other mineral substances, or poisonous colors or flavors or other ingredients deleterious or detrimental to health or any vinous malt or spirituous liquor or compound or narcotic drug.

See also sections on:

(1) Food Inspection Decisions, and (2) Regulatory Announcements, with reference to particular definitions, standards and labeling, counts and weights.

### Confectioners!

*The Voluntary Sanitary Code which is being presented in this and succeeding issues of THE MANUFACTURING CONFECTIONER has taken several months of effort to prepare. Its object is to prevent a recurrence of the disgraceful situation which occurred in New York last summer—to make "white lists" as unnecessary as they are unwelcome—in short, to put the candy industry on a firmer basis of sanitation and hygiene. Those who wilfully violate public confidence and the integrity of the industry must be censured from within the industry. Those who err against the sanitary standards through inexperience or ignorance must have some code to guide them. Therefore this is your code in a very real sense, confectioners. If you disagree with its provisions, we invite your constructive criticism before preparing the final draft for publication in book form. If you like it, write us so that we may know that it has your support.—THE EDITOR.*



## A Fastidious Public

(Continued from page 39)

throats by self-constituted guardians of the public interest.

To arrive at such a standard there must be some starting point—some industry-minded group of people who are willing to be the first to subject their ideals and their standards to the scorching light of neighborly criticism. THE MANUFACTURING CONFECTIONER, in originating the first draft of the proposed sanitary code for the confectionery industry, lays itself open to the barbs which are certain to come the way of those who are first in anything. And what is more, it will actually welcome these crit-

icisms and try to use them as stepping stones in the path of progress to an ideal. At the completion of serial publication of the proposed code, these criticisms will be made the basis for whatever revisions shall at that time appear desirable and the final draft, as amended, submitted to the executive committee of the N. C. A. for their consideration and official approval.

The voluntary or self-imposed provisions of the code will be begun in next month's issue.



**FRANK H. PAGE**  
of the National Equipment Co.  
Pioneer in the Candy Machinery Business

**F**RANK H. PAGE, president and founder of the National Equipment Company, and prominently identified with several others of the city's leading industrial enterprises, died Wednesday morning, December 19th, at his home, 30 Warren Terrace, Longmeadow, after a short illness of heart trouble. He was 64 years old.

Mr. Page was born in Holyoke, April 24, 1864. Soon after his graduation from Massachusetts Institute of Technology, Mr. Page went to Minneapolis, where he took a leading part in the establishment of the Northwestern Knitting Company, serving as the company's first treasurer and general manager. He was associated, in this work, with George Munsing, after whom "Munsingwear" is named.

Selling his interest in the knitting concern, he became connected with the Paris-Murton Company of Minneapolis, now a part of the National Candy Company, and during his connection with this company he and the late Al Paris developed the Automatic Starch Buck.

At that time there was little ma-

chinery used in candy production, and as the field looked promising, Mr. Page, Mr. Paris and their associates formed the Confectioners Machinery & Manufacturing Company in 1891 and began the manufacture of Starch Bucks. The business prospered only moderately, and as its market seemed to lie largely in the east, the plant was moved to Springfield, Mass., in 1894, occupying premises on Liberty Street.

The business grew rapidly under Mr. Page's leadership and within a few years was obliged to move to larger quarters in the building at 60 Hampden Street. The exceptional growth of the company and the increasingly important position it came to occupy in the world of confectionery manufacture dated from the move into these larger quarters. Associated with Mr. Page during these years were Clifton A. Crocker and the late Henry H. Bowman, for many years president of the Springfield National Bank.

In 1909, having reached a point where it virtually dominated its particular field, Mr. Page and his associates joined forces with a group of internationally known candy machinery manufacturers in greatly extending the financial resources of the company, the name of which was changed to the National Equipment Company. At that time the company had enlarged its quarters until it occupied four entire floors of the Hampden Street building and still required more room for growth.

This led to plans for the present modern manufacturing plant on North Main Street, which was completed in 1913. It has been enlarged and extended during the last 15 years, while the candy-making machinery it has manufactured also has been subject to vast improvements.

Through the 37 years of this company's existence Mr. Page had been its directing head not only in its business administration but in the mechanical problems which have resulted in the increasing use of machinery in candy manufacture and wrapping.

The National Equipment Company from its founding as the Confectioners Machinery & Manufacturing Company claimed Mr. Page's first interest, although he found time to become interested in other affairs. For a number of

years he was one of the principal stockholders of the Atlantic Refrigerating Company. He served as president of the Chamber of Commerce for two years. He had served continuously as a director of the Springfield National Bank since 1916.

The present Package Machinery Company of Springfield was another company in the establishment of which Mr. Page played a leading part, being instrumental in engineering the merger of several concerns and the centralization of their manufacturing operations in one plant, with the late Thomas Jefferson as its head. He also was one of the principal stockholders of the Van Norman Machine Tool Company and served as its treasurer for a number of years, holding that office until his death.



"Fellow Bakers -- make dis a rule fo' 1929: Be well bred - be early to rise - don't be a rounder - don't loaf - get de dough every day whetha' yo' knead it or not - and stretch de Christmas Spirit right thru '365 days in de year."

READ MACHINERY COMPANY, YORK, PA.

Here is a New Year's message of rare originality, which gets accross some good wholesome philosophy in the veracular of the practical men of the baking industry. Perhaps this may inspire some similar application to the candy industry.



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